Always use pneumatic otoscopy or tympanometry to confirm middle ear effusion

- No effusion
  Not OME or AOM
- Yes effusion present
  - Signs or symptoms of AOM-including ear pain, fever, and bulging yellow or red TM
    - No
      - **OME**
        - Presence of effusion (including immobility of the tympanic membrane) WITHOUT
        - Signs or symptoms of acute infection. Nonspecific signs and symptoms (rhinitis, cough, diarrhea) are often present.

      Treatment
      Antibiotic treatment has not been demonstrated to be effective in long-term resolution of OME. A single course of treatment for 10-14 days may be used when a parent or caregiver expresses a strong aversion to impending surgery[1].

    - Yes
      - **AOM**
        - History of acute onset of signs and symptoms WITH
        - The presence of middle ear effusion (indicated by bulging of the TM or imited/absent TM mobility or otorrhea or air-fluid level) WITH
        - Signs or symptoms of middle-ear inflammation (indicated by distinct erythema of the TM or distinct otalgia)

      Treatment
      Management should include assessment of pain → if pain is present, clinician should recommend treatment to reduce pain.

Age	**Certain Diagnosis**	**Uncertain Diagnosis**
< 6 mo	Antibacterial therapy	Antibacterial therapy
6 mo to 2 y	Antibacterial therapy	Antibacterial therapy if severe illness; observation option* if nonsevere illness
> 2 y	Antibacterial therapy if severe illness; observation option* if nonsevere illness	Observation option*

*Observation is an appropriate option only when follow-up can be ensured and antibacterial agents started if symptoms persist or worsen. Nonsevere illness is mild otalgia and fever <39°C in the past 24 hours. Severe illness is moderate to severe otalgia or fever > 39°C. A certain diagnosis of AOM meets all 3 criteria:

1. rapid onset,
2. signs of middle ear effusion, and
3. signs and symptoms of middle-ear inflammation.

Share this algorithm with parents. Explain when the risks of using antibiotics outweigh the benefits.

Avoiding unnecessary treatment of OME would save up to 6-8 million courses of antibiotics each year.[2]

Reference

1. American Academy of Family Physicians, American Academy of Otolaryngology-Head and Neck Surgery, American Academy of Pediatrics Subcommittee on Otitis Media with Effusion. Otitis media with effusion. Pediatrics 2004;113(5):1412-29.
2. Stool SE, Berg AO, Berman S, et al. Otitis media with effusion in young children. Clinical practice guideline. AHCPR Publication no 94-0622 1994.